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Descriptors-*ANNOTATED BIBLIOGRAPHIES, COMPUTERS, DIRECTORIES, *INSTRUCTIONAL MEDIA, LANGUAGE LABORATORIES, MULTIMEDIA INSTRUCTION, PROGRAMED INSTRUCTION, RESEARCH REVIEWS (PUBLICATIONS), *TEACHER EDUCATION, TELEVISION

This bibliography is designed to be a working reference for teacher educators and administrators concerned with new media utilization in the improvement of teacher training programs. Books, periodicals, and dissertations are listed under these headings Projected Media, Recorded Materials, Television, Programed Instruction, Multimedia Systems, Computers, Language-Learning Laboratories, and plant Desing for Educational Technology. Other annotated listings include U.S. Office of Education Research Re orts, General References in Instructional Technology and Basic Audiov sual Texts, References Pertinent to Current Teacher Preparation Curriculum Revision, Directory of Organizations Disseminating Information on Educational Media and Teacher Education, and New Educational Media Guides, Directories, and Bibliographies. (RS)

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# TEACHER EDUCATION AND MEDIA -- 1964

## A Selective, Annotated Bibliography

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A Dissemination Report of
The Teacher Education and Media Project
American Association of Colleges for Teacher Education

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# FOREWORD

The American Association of Colleges for Teacher Education (AACTE) is keenly sensitive to the need for national innovation and its implementation in teacher education programs. This organization, devoted to ever-improving quality in the education of teachers, is no neophyte in matters of technological instructional media.

In our rapidly changing scientific society, the AACTE has been increasingly concerned with the role of technology in education. Specific concern with the new educational media dates back to 1956 with the establishing of the Subcommittee on Television and Teacher Education. Through the efforts of this committee developed the first nationwide TV college course, "Continental Classroom," co-sponsored by the AACTE and the National Broadcasting Company. The several courses televised on "Continental Classroom" during its five-year run were offered for credit by more than three hundred colleges and universities. The Subcommittee also developed in 1960 the publication, Television in Teacher Education.

During 1960 the AACTE sponsored a national invitational conference on teacher education and new media, and the Association's biennial School for Executives considered in depth the impact of instructional technology on the "Direction for the Sixties." From these conferences emerged a desire to conduct a study on a national scale in the media and teacher education area. The Subcommittee on Instructional Media developed the proposal for the project that has produced this publication, the Teacher Education and Media Project. In 1963 the Subcommittee also published Survey of Programed Instruction in Teacher Education.

This bibliography, prepared by the staff of the TEAM Project, is being published by the AACTE as part of its continuing effort to study and improve the education of teachers. The Association is indebted to the Associated Organizations for Teacher Education and the U.S. Office of Education for their cooperation in the sponsorship of the Project as well as to Dr. Desmond Wedberg and Clarice Kelley who carried out the development of this report.

Edward C. Pomeroy
Executive Secretary
American Association of Colleges for Teacher Education

# INTRODUCTION

It is significant of the rapidly growing interest in instructional media utilization by institutions of higher learning, particularly institutions preparing teachers, that the American Association of Colleges for Teacher Education in 1963 initiated at the national level the Teacher Education and Media Project (TEAM). The TEAM Project has projected three dissemination reports prior to the final report in 1965 of which this is the first. It is essentially a selective bibliography developed from a search of the professional and popular literature considered pertinent to teacher education faculty and staff concerned with new media utilization in the improvement of teacher preparation instructional programs.

This report lists articles, books and research reports as well as information on the procurement of these materials. Basic texts and general references in the area of audiovisual education have also been included for those not already knowledgeable in the field of instructional technology. Included also is information about the educational organizations and agencies and their publications devoted primarily to reporting and evaluating the promising in new instructional media techniques and utilization. Finally, a section has been included listing those references the TEAM Project staff has found pertinent to current teacher preparation curriculum revision.

A recently completed pilot study of new media utilization in the pre-service preparatory sequence of teacher education revealed that while but fifteen percent of reporting teacher education institutions are currently operating well planned media utilization programs, sixty percent are presently involved in long-range planning emphasizing the use of instructional media in professional teacher preparation curriculum. The decision makers in teacher education are aware that the knowledge and population explosions are forcing a near miracle expansion of facilities in the coming decade. Of equal concern are the new instructional technologies currently reshaping the academic process and the need for the entire educational community to become adaptable to these changes. The "direction of the Sixties," therefore, forecasts a breakthrough in new media utilization among teacher education colleges and universities. Functioning as a springboard in implementing this breakthrough, the TEAM Project dissemination reports are designed to orient teacher education faculties, staffs and students alike to where we have been, where we are and where we are going.

In short, this first TEAM Project dissemination report is designed as a working reference for those teacher educators and administrators sufficiently interested and motivated to move to the action level of teacher preparation curriculum improvement through the thoughtful employment of instructional media.

Herbert F. LaGrone, Director
Desmond P. Wedberg, Associate Director
Clarice Y. Kelley, Research Assistant
Ellen M. Hegman, Secretary

Teacher Education and Media Project
Washington, D. C.
May 1964

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# SECTION I

## TEACHER EDUCATION and NEW EDUCATIONAL MEDIA

(Popular and Professional Literature: Books, Periodicals, Dissertations)

American Association of Colleges for Teacher Education. Teacher Education, Direction for the Sixties: Tenth Biennial School for Executives. Washington, D.C.: the Association, 1961, 102 p.

Nine papers, several concerned with new instructional media, delivered at the 1960 AACTE School for Executives.

American Association of Colleges for Teacher Education. Three Conference Working Papers for the National Conference on Teacher Education and New Media. Washington, D.C.: the Association, 1961, 28 p.

See the abstract of this NDEA Title VII-B Project in Section II-A under Allen and Pomeroy, page 22.

Association for Higher Education. Critical Decisions in Higher Education: The Proceedings of the Eighteenth Annual National Conference on Higher Education, G. Kerry Smith (editor). Washington, D.C.: The National Education Association, 1963, 302 p.

Reports current (1963) and projected implications of new educational technologies for higher education institutions.

Audiovisual Communication Review, Special Issue: "Learning Theory and AV Utilization," 9:5 (September-October 1961), 88 p.

Six papers considering the need for careful and systematic learning theory development in new educational media utilization.

Audiovisual Instruction, Special Issue: "New Media in Teacher Education," 6:41-76 (February 1961).

Six articles covering pre- and in-service new educational media utilization techniques.

Audiovisual Instruction, Special Issue: "Teacher Education," 4:4-30 (January 1959).

Five articles concerned with the pre-service preparation of teachers in new educational media utilization.

Audiovisual Instruction, Special Issue: "Tremors in the Ivory Tower," 8:195-282 (April 1963).

Entire issue devoted to developing patterns in higher education institutions as the result of instructional technology.

Beggs, Walter K. "The Teacher of Tomorrow," Audiovisual Instruction, 7:383-7 (June 1962).

Speech delivered at the 1962 DAVI Convention in Kansas City, Missouri.

________________. "Trends in Teacher Education: Their Implications for AV," Audiovisual Communication Review, 8:67-73 (Supplement 2, September-October 1960).

A paper presented at a "Seminar on the Education of the A-V Communication Specialist," March 1960, Cincinnati, Ohio.

Brown, James W. and James W. Thornton, Jr. New Media in Higher Education. Washington, D.C.: Association for Higher Education and the Division of Audiovisual Instructional Service, NEA, 1963, 182 p.

This volume consists of reports and findings on 90 outstanding undertakings from over 40 colleges and universities. Also, a general rationale of the new media in education is offered and critical questions are posed on the relationship of audiovisual practices to aims and purposes of higher education.

deKieffer, Robert. A series of three articles which appeared in Audiovisual Communication Review:
"Audio Visual Activities of State Departments in Teacher Education," 6:292-300 (Fall 1958).
"AV Activities of Extension Divisions in Teacher Education," 7:37-46 (Winter 1959).
"AV Activities of Colleges and Universities in Teacher Education," 7:122-37 (Spring 1959).

Report of a survey to determine the extent to which audiovisual methods and techniques are being incorporated into pre-service and in-service teacher education programs throughout the nation.

DeWald, Major A. B. and others. "The West Point Audiovisual Story," Educational Screen and Audiovisual Guide, 43:18-35 (January 1964).

Eight articles describing the audiovisual program at the U.S. Military Academy, West Point, New York.

Driscoll, John Parke. The Comparative Effectiveness of High and Low Degrees of Visual Reinforcement of Concepts in a Survey Course in Education Utilizing Two Class Sizes. Doctoral Dissertation. Pennsylvania State University, 1957.

Large and small group instruction via closed-circuit television and motion pictures versus conventional lecture-discussion method in introduction to education course.

Edling, Jack V. "Instructional Technology and Research," Journal of Teacher Education, 13:346-53 (September 1962).

Synthesis of types of instructional technology research.

Fulton, W. R. "Audio-Visual Competence and Teacher Preparation," Journal of Teacher Education, 11:492-6 (December 1960).

Describes methods of achieving and determining audiovisual competence in teacher education.

Fulton, W. R. and O. J. Rupiper. "Observation of Teaching: Direct vs. Vicarious Experiences," Journal of Teacher Education, 13:157-64 (June 1962).

Report of a Title VII project conducted by the authors. See Section II-A, page 24 for annotation.

Fulton, W. R. and F. A. White. "What Constitutes Teacher Competence in Audio-Visual Communication?" Phi Delta Kappan, 40:158-60 (January 1959).

Statement of what the classroom teacher should know about the selection and use of audiovisual materials and how to achieve this objective.

Gibbony, Hazel L. The Instructional Materials Center in Teacher Education. Doctoral Dissertation. Ohio State University, 1957.

Describes the history and development of the Curriculum Materials Center at the University, discusses its role in the teacher education program, and analyzes its use by faculty, students and student teachers.

Glaser, Robert (editor). Training Research and Education. Pittsburgh: University of Pittsburgh Press, 1962, 596 p.

The result of a working conference of leading psychologists in the field of training and education in which 18 authors review and analyze research in skill training, training of technicians, proficiency measurement, instructional goals and other aspects of training research accomplished by experimental psychology.

Gould, Orrin Everett. The Character of Observation Under CCTV, Classroom Visitation, and Instructional Films in an Introductory Education Course. Doctoral Dissertation. University of Minnesota, 1960.

Explored three media for classroom observation in the University's College of Education's beginning professional education course, "Introduction to Secondary School Teaching."

Grimes, William and Robert deKieffer. The Status of Audiovisual Activities of NUEA Member Institutions. Boulder, Colorado: National University Extension Association, University of Colorado, Bureau of Audiovisual Instruction, 1963, 129 p.

Report of a survey conducted to determine the present and possible future status of audiovisual units in institutions belonging to the NUEA. See also, deKieffer, Section I, page 2.

Haleff, M. "Learning in an AV Equipment Laboratory," Educational Screen and Audiovisual Guide, 42:564-5 (October 1963).

Describes Hunter College's (New York City) audiovisual equipment laboratory.

Hauf, Harold D. and others. New Spaces for Learning--Designing College Facilities to Utilize Instructional Aids and Media. Troy, New York: Rensselaer Polytechnic Institute, School of Architecture, 1961.

Illustrated report defining the design criteria for facilities for optimum use of instructional technology.

Hite, Herbert. "Educators: Still the No. 1 Target," Audiovisual Instruction, 5:206-8 (September 1960).

Six tips on how to approach colleagues about audiovisual utilization.

Klein, Raymond L. "Technological Influences; Section 2. Audio-Visual Breakthrough," The Outlook in Student Teaching, 41st Yearbook of the Association for Student Teaching, 1962, p 118-28.

Summary of recent developments in audiovisual instruction and educational television. This yearbook and other publications of the Association may be secured from Dr. A. C. Moon, State College of Iowa, Cedar Falls. See also Daniel Tanner, Section I-D, page 18.

Lewis, Philip. "Emerging Technology and Instructional Systems," The National Elementary Principal, 43:34-9 (September 1963).

Brief review of the development of educational technology and short descriptions of several projects in instructional technology.

Little, John. "Results of the Use of Machines for Testing and for Drill, Upon Learning in Educational Psychology," Journal of Experimental Education, 3:45-9 (September 1934).

College students in an educational psychology course are taught with a testing machine, a drilling machine, or neither.

Logan, E. M. "What Constitutes a Working AV Lab Program?" Educational Screen, 40:539-40 (October 1961).

Guide for institutions initiating a new course or desiring to evaluate their existing introductory audiovisual lab program.

Logan, Edwin M. "Why Not An Audiovisual Internship?" Audiovisual Instruction, 5:71 (March 1960).

Suggests an internship program in audiovisual education (at the graduate level). Cites as a case in point a project which the author carried out while a graduate student at the University of Virginia.

McIntyre, Charles J. "The Impact of New Media on College Instruction," Journal of Higher Education, 34:85-91 (February 1963).

Deals with some of the problems associated with integrating and institutionalizing new instructional media on a college campus.

Mars, W. J. "Student Teachers Teach Themselves," Educational Screen and Audiovisual Guide, 42:566-7 (October 1963).

Self-instruction course in audiovisual equipment operation is described.

Moe, Richard. An Analysis of Objectives, Materials, and Methods Used in Teaching the Introductory Course in Education in Selected Accredited Colleges and Universities. Doctoral Dissertation. University of Colorado, 1961.

Profile of the introductory course in professional education based on questionnaire responses from 311 colleges and universities in the six regional accrediting areas.

Moldstad, John. "Doctoral Dissertations in Audio-Visual Education," Audiovisual Communication Review; Supplement I, 6:36-48 (Winter 1958); Supplement II, 7:142-56 (Spring 1959); Supplement III, 9:220-9 (July-August 1961).

Three lists of current doctoral dissertations in the field of audiovisual education.

Murray, J. R. "AV Course for Teachers, Essential or Expendable?" Educational Screen, 38:291-3 (June 1959).

Article gives reasons prospective teachers need practice with the modern tools of teaching. Bibliography is included.

Oxhandler, Eugene K. "Bringing the 'Dons' Up to Date," Audiovisual Instruction, 8:566-9 (October 1963).

A new look at Great Britain's Don system as applied to instructional technology.

Reynard, H. E. "Pre-Service and In-Service Education of Teachers; New Media in Teacher Education," Review of Educational Research, 33:374-5 (October 1963).

States that there are two areas for needed research in new media in teacher education: (1) closed-circuit television and (2) programed instruction.

A Second Annual Report to the Ford Foundation on Team Teaching in Maine. Orono, Maine: University of Maine, Department of Public Information, 1964, 80 p.

Second-year report of a five-year project to improve a university's teacher education program through incorporation of the concepts and practices of team teaching, fifth-year training, curriculum modifications and the use of new communication media.

Torkelson, G. M. and E. K. Oxhandler. "New Directions for AV Training," Educational Screen and Audiovisual Guide, 39:638-40 (December 1960).

Description of a NDEA research project shortly after it was begun at Pennsylvania State University. See Section II-A, page 30.

Williams, E. O. "Teacher Education and the Use of Instructional Materials," Journal of Teacher Education, 12:104-5 (March 1961).

Resolutions of two organizations recommending teacher education programs introduce or develop instruction in the use of libraries and library resources, including the new media of communication.

Zimmerman, Harry Paul. An Evaluation of Pre-Service Audio-Visual Experiences in Selected Oklahoma Teacher Education Institutions Based on Reactions of Teachers and Supervisors. Doctoral Dissertation. University of Oklahoma, 1958.

Evaluated experiences provided by ten colleges and universities in developing audiovisual knowledges and competencies among pre-service teacher education students. (For abstract, see also Audiovisual Communication Review, 7:312-3, Fall 1959.)

## SECTION I

### A. PROJECTED MEDIA

"Breakthrough in Classroom Projection," American School and University, 36:35 (September 1963).

News item of revolutionary low-cost 12mm projection and film design system that predicts a 2-1/2 minute single concept color film will cost 30 cents.

Caspers, Wesley. An Experimental Evaluation of Certain Motion Picture Films in Selected Educational Psychology Classes in Kansas Colleges. Doctoral Dissertation. University of Minnesota, 1956.

Randomly selected students of educational psychology were shown patterns of seven films selected from sixteen to be evaluated. Films cover four subject areas: Growth and Development, Motivation and Interest, Learning in Groups, and Individual Differences.

Film and Television in Education for Teaching: A Report of a Joint Working Party of the Association of Teachers in Colleges and Departments of Education and the British Film Institute. London: British Film Institute, 1963 (Revised Edition), 66 p.

Report explaining ways and means of introducing the study of film and television into British education for teaching and to students in training for teaching.

Forsdale, Louis (editor). 8mm Sound Film and Education. New York: Columbia University Teachers College, Horace Mann-Lincoln Institute of School Experimentation, 1963, 166 p.

Papers from a 1961 conference of authorities from the fields of education, industry, religion and the military concerned with the status and development possibilities of the 8mm film medium.

Hoban, Charles F. and Edward B. van Ormer. Instructional Film Research, 1918-1950. Instructional Film Research Program, The Pennsylvania State College, Technical Report No. SDC 269-7-19. Port Washington, L.I., New York: Special Devices Center, 1950.

"...an integrated summary of the diverse and widely scattered research studies on the educational and instructional effects of motion pictures... it will probably stand for a long time to come as the standard historical summary of the film research literature for the first half of the 20th century." (A. A. Lumsdaine in the Audiovisual Communication Review, 1:3, 1953.)

Klooster, Ted. "Buying and Using the Overhead Projector," *American School and University*, 36:34-5 (January 1964).

Outlines six major concerns when purchasing overhead projection equipment.

Nardelli, Robert R. *Enriching Teacher Education Through Kinescope Recordings.* San Diego, California: San Diego State College, 1960, 7 p.

Describes program of kinescoped lesson demonstrations, prepared with college faculty consultation and evaluated by teacher education students with faculty.

Smith, G. R. "Time Lapse Camera Records Student Teacher in Action," *Audiovisual Instruction*, 8:319 (May 1963).

Describes a time-lapse technique using the 16mm camera for recording student teaching.

Stone, J. C. "Realism in Teacher Education," *Journal of Teacher Education*, 11:415-6 (September 1960).

Unique follow-up technique of role playing suggested after showing of 16mm film, "Teachers."

"This is the Year for 8mm," *Overview*, 4:27-30 (February 1963).

Discusses the potentialities for educational use of 8mm sound film.

Vandermeer, A. W. "The Meaning of 8mm Sound Film for Education...as related to Teacher Education," *Educational Screen and Audiovisual Guide*, 41:76-7 (February 1962).

One of several articles in an issue devoted to 8mm film.

## SECTION I

### B. RECORDED MATERIALS

Bruntz, George G. "Hear Yourself as Others Hear You," Journal of Teacher Education, 9:140-1 (June 1958).

Suggests utilizing a tape recorder for self-evaluation of teaching techniques.

Ersland, Lolita. A Study of the Use of Tape Recordings in Teacher Education. Doctoral Dissertation. Iowa State University, 1955.

A program of audio-tape recorded elementary classroom lessons is developed and evaluated by student teachers, instructors and supervisors.

Funfar, A. "Experiment in Developing Tape Recordings for Use in Teacher Education," Teachers College Journal, 26:86-9 (March 1955).

"...Recordings of actual classroom situations may prove a most important technique in bridging the gap between descriptions of good teaching and the actual living, on-going, vital classroom."

## SECTION I

## C. TELEVISION

Abel, Frederick Paul. Use of Closed Circuit Television in Teacher Education: Relationship to Achievement and Subject Matter Understanding. Doctoral Dissertation. University of Minnesota, 1961.

Study compares the effects of direct observation, closed-circuit television, and instructional films on subject matter outcomes and the ability to apply that knowledge to classroom teaching situations.

Adams, John C., C. R. Carpenter and Dorothy R. Smith (editors). College Teaching by Television: A Report of a Conference Sponsored Jointly by the Committee on Television of the American Council on Education and the Pennsylvania State University at University Park, Pennsylvania. Washington, D. C.: American Council on Education, 1958, 234 p.

Proceedings of a 1957 conference designed to focus attention on the needs and possibilities of improving teaching over closed-circuit or broadcast television.

Adams, W. H. "Pushbutton Observation for Student Teachers," Texas Outlook, 43:26-7 (January 1959).

Describes the use of closed-circuit television at Abilene Christian College for teacher education observation purposes.

Adkins, Edwin P. (editor). Television in Teacher Education: A Report on the Possibilities of Television for the Education of Teachers, for College Instruction in General, and for Public Schools. Washington, D. C.: American Association of Colleges for Teacher Education, NEA, 1960, 72 p. (out-of-print).

Seven reports outlining the possibilities of open- and closed-circuit television for the education of teachers, for college instruction in general and for public schools.

Altenhein, M. R. "CCTV or Classroom Observation: Which Shall It Be?" Peabody Journal of Education, 40:296-300 (March 1963).

Closed-circuit television vs. classroom observation (describes the Hunter College, New York City, program).

Broderick, Gertrude G. (editor). Proceedings of Conference on Educational Television, Circular No. 574. Washington, D.C.: U.S. Office of Education, 1958, 88 p.

Broderick--continued

Reports discussion and evaluations of representatives from 58 national organizations concerned with the application of the medium in all areas of education.

Campion, Lee E. and Clarice Kelley. Studies in the Growth of Instructional Technology, II: A Directory of Closed-Circuit Television Installations in American Education, With a Pattern of Growth. Technological Development Project, Occasional Paper No. 10. Washington, D.C.: Department of Audiovisual Instruction, NEA, 1963, 152 p.

An up-to-date (1963) careful look at the scope and consequence of closed-circuit instructional television.

Chabe, A. M. "Experiment With CCTV in Teacher Education," Peabody Journal of Education, 40:24-30 (July 1962).

Describes experiment at the State University of New York College of Education at Fredonia comparing observation via closed-circuit television with actual classroom observation.

Deviney, Robert Dawson. An Evaluation of Closed-Circuit Television Observation for Students Taking Certain Courses in Elementary Education. Doctoral Dissertation. North Texas State University, 1962.

Controlled study that measures achievement, problem solving ability and attitude toward closed-circuit television classroom observations among elementary education students.

Dreyfus, Lee S. and Wallace M. Bradley (editors). Televised Instruction: A Series of Lectures from Wayne-RCA Invitational Conference on Televised Instruction. Detroit: Mass Communications Center, Wayne State University, 1962, 173 p.

Fifteen papers by educational television authorities from the fields of education, government, military and industry providing additional knowledge in the areas of technology, research, application and production.

Edelman, Robert S. "SWIETVC's Intern-Teacher Program," NAEB Journal, 22:18-20 (September-October 1963).

Four Indiana colleges--Evansville College, Indiana State College, Indiana University and Oakland City College--have participated in a program which utilized television in student teaching.

Educational Television, Special Issue: "Television in Teacher Education in the South." Atlanta, Georgia: Southern Regional Education Board, 1963, 16 p.

Institutional reports of current (1963) television activities in teacher education among the sixteen states that comprise the Southern Regional Education Board.

Freedman, F. B. "Teacher Education by Closed-Circuit Television," Journal of Teacher Education, 10:291-6 (September 1959).

Outlines the closed-circuit television program at Hunter College, New York City.

Gauerke, H. J. and A. K. Cardew. "Teacher Training via Television," Modern Language Journal, 47:69-70 (February 1963).

Experiment conducted by Eastern Michigan University's foreign language department in training foreign language teachers to teach via television.

Haney, Captain John A. "A CCTV Studio With the Instructor in Mind," American School and University, 36:58-60 (September 1963).

Illustrated description of the closed-circuit television system at the U.S. Air Force Academy, Colorado.

Holmes, Presley D., Jr. "Wayne State Carries Out a 3-Year CCTV Project," NAEB Journal, 21:36-40 (September-October 1962).

An experiment in which eight courses were taught via closed-circuit television with no conventional section allowed. Three of these were education courses.

Keller, Robert J. "The Teacher's College: Research in Closed Circuit TV," North Central Association Quarterly, 35:312-4 (April 1961).

A summary of three Ph.D. theses comparing the classroom observation of students of teacher education by means of closed-circuit television, film and direct classroom visitation; the effect of the media upon the students' observation and achievement and their attitude toward the media; advantages and problem areas of closed-circuit television in teacher education.

Keller, Robert J. and Orrin E. Gould. Closed Circuit Television in Teacher Education. Minneapolis: University of Minnesota, College of Education, 1957, 65 p.

Progress report after second year of a three-year project investigating utilization of the medium in four areas of teacher education.

Lofthouse, Yvonne Marie Sherriff. An Experiment With Closed Circuit Television Instruction in Teacher Education. Doctoral Dissertation. Wayne University, 1957.

Lofthouse--continued

Experiment involved the teaching of a College of Education course, "Methods and Materials of the Language Arts," by means of closed-circuit television and compared learning with conventional classroom presentation.

McKune, Lawrence E. (editor). National Compendium of Televised Education, Volume 10. East Lansing: Michigan State University, Continuing Education Service, 1963, 253 p.

Tabulated from 4,743 sources, contains pertinent data concerning televised courses for credit and for supplemental course work, informal uses of the medium for education, thoughtful commentary by persons responsible and related information.

Murr, Kenneth. "Dual Channel TV Aids Classroom Observation," NAEB Journal, 19:23-32 (September-October 1960).

Author discusses advantages and problems in using closed-circuit television for classroom observation at Pennsylvania State University.

Nardelli, Robert R. The Campus Laboratory School, Closed Circuit Television and Teacher Education. San Diego, California: San Diego State College, 1959, 8 p.

Students in teacher education are given lesson demonstrations in second and fifth grade teaching by closed-circuit televising of classes from the campus laboratory school.

________________. "CCTV: Campus Lab for Teacher Education," Educational Screen and Audiovisual Guide, 39:72-5 (February 1960).

Describes San Diego State College's use of closed-circuit television.

Neale, Daniel Christopher. Observation by Closed Circuit Television, Kinescope, and Classroom Visitation in an Introductory Education Course. Doctoral Dissertation. University of Minnesota, 1961.

Controlled experiment investigates the effectiveness of various types of classroom observation among students beginning professional education.

Nearing, Charles Lynn. The Use of Kinescope Recordings for Observation of Classroom Situations in a Beginning Teacher Training Course. Doctoral Dissertation. Michigan State University, 1962.

Experiment to determine the comparative effectiveness of kinescopic recordings and field trips in a teacher training course.

Rench, Hazel S. "Observing Teaching Via Closed-Circuit Television," Journal of Teacher Education, 12:39-42 (March 1961).

Report of how closed-circuit television is used for observation at the State University of New York College of Education, Brockport.

Rumford, Herbert P. "An Experiment in Teaching Elementary School Methods Via Closed Circuit Television," Journal of Educational Research, 56:139-43 (November 1962).

Research was done as partial fulfillment of doctoral requirements at the University of Colorado in 1960.

"Teacher's AV Course Taught by Television," The Nation's Schools, 67:105-6 (February 1961).

Investigations in progress at the University of Wisconsin under Title VII of the NDEA to determine effectiveness of teaching audiovisual methods by television.

The Teachers College Journal, Special Issue: "Instructional Television at Indiana State College," 34:162-96 (May 1963).

Thirteen articles outline a total college commitment to instruction by television.

Teaching by Television: A Report from the Ford Foundation and the Fund for the Advancement of Education. New York: the Fund, 1961 (second edition), 87 p.

Summary of Ford supported television teaching experiments in more than fifty colleges and universities and 250 school systems.

Thompson, Franklin James. Use of Closed Circuit Television in Teacher Education: Relationship to Professional Attitudes and Interests. Doctoral Dissertation. University of Minnesota, 1960.

Study to investigate the relationship between the attitude of students in "Introduction to Secondary Education" and the techniques of classroom observation employed. The observation techniques are (1) direct classroom observation, (2) observation by means of closed-circuit television, (3) instructional films instead of observation.

Torkelson, G. M. "Teacher AV Education Via Closed-Circuit Television," Audiovisual Communication Review, 6:189-99 (Summer 1958).

Report of an experiment in teaching portions of a basic audiovisual course via closed-circuit television at the Pennsylvania State University.

Tyler, Keith I. "The Impact of Instructional Television on Teaching Roles and Functions," Audiovisual Communication Review, 10:51-7 (January-February 1962).

Discusses the problems of initiating instructional television, the adjustments involved and implications for production and the television teacher.

Weiss, David. "Closed-Circuit Television and Teacher Education," The Educational Forum, 26:229-31 (January 1962).

An assessment of the relative merits of closed-circuit television as a tool for teacher preparation and in-service training based on author's observations at Hunter College, New York City.

Woodward, John C. "The Use of Television in Teacher Education," Journal of Teacher Education, 15:56-60 (March 1964).

Report of a three-year experiment conducted at San Jose State College (California) studying the use of closed-circuit television in teacher education.

Wooley, Ethel, and Ralph L. Smith. "Studio Teaching Before Student Teaching," Journal of Teacher Education, 13:333-9 (September 1962).

Report of the use of television in the professional sequence at Illinois State Normal University.

Young, Doris A. "Preparing Teachers to Use Television," Journal of Teacher Education, 13:181-6 (June 1962).

General article dealing essentially with the role of the classroom teacher in using television.

## SECTION I

## D. INSTRUCTIONAL SYSTEMS

### 1) Programed Instruction
### (Including Teaching Machine Instrumentation)

American Association of Colleges for Teacher Education. Survey of Programed Instruction in Teacher Education - 1963. Washington, D.C.: the Association, 1963, 32 p.

Reports statistically and analyzes the activity in programed instruction current (1963) among institutions holding membership in the American Association of Colleges for Teacher Education.

Coulson, John E. "Programed Instruction: A Perspective," The Journal of Teacher Education, 14:373-8 (December 1963).

Suggests the direction for future research in programed instruction is to discover ways in which techniques of programed instruction may be combined with other educational methods to optimize instruction for different tasks and for different student characteristics.

Glaser, Robert and Halmuth H. Schaefer. "Programmed Teaching," Journal of Teacher Education, 12:107-13 (March 1961).

Background statement regarding programed instruction.

Johnson, Donald. A Survey of the Comparative Effectiveness of Programed Self-Instruction Versus the Demonstration-Laboratory Method in Teaching the Operation of Six Types of Audiovisual Equipment. Doctoral Dissertation. University of Colorado.

Reports on programed instruction in audiovisual equipment operation for the training of pre-service teachers, faculty members and graduate students in the University of Colorado School of Education.

Jordan, James A., Jr. "Teaching Machines and Philosophy of Education," The School Review, 71:151-7 (Summer 1963).

Emphasizes the need for rational goals of education and relates to the teaching machine the concept that "if one commits himself to a tool he commits himself to the kind of goal for which the tool is efficient."

Lumsdaine, A. A. and Robert Glaser (editors). Teaching Machines and Programmed Learning: A Source Book. Washington, D.C.: Department of Audiovisual Instruction, NEA, 1960, 724 p.

Lumsdaine and Glaser--continued

Comprehensive reference source on teaching machines and the techniques of instruction associated with them; representative picture of past and current development to 1960.

Naumann, Theodor F. "A Laboratory Experience in Programed Learning for Students in Educational Psychology," The Journal of Programed Instruction, 1:9-18 (1962).

Experiment to determine the effectiveness of teaching educational psychology by the Holland-Skinner Psychology Program and teaching machines.

Ofiesh, Gabriel D. and Wesley C. Meierhenry (editors). Trends in Programed Instruction. Washington, D.C.: Department of Audiovisual Instruction, NEA, 1964, 302 p.

Papers from the first annual convention (1963) of the National Society for Programmed Instruction.

Phi Delta Kappan, "A Special Issue on Programed Instruction," 44:241-302 (March 1963).

Fifteen articles by outstanding authors on the topic.

Pressey, Sidney L. "A Puncture of the Huge 'Programing' Boom?" Teachers College Record, 65:413-18 (February 1964).

On the basis of experiment and conceptual criticism, the inventor of the first teaching machine takes a critical look at both programed learning and the theories on which it rests and suggests other ways of improving teaching and learning.

Rabinowitz, W. and H. E. Mitzel. "Programing in Education and Teacher Preparation," Teachers College Record, 64:128-38 (November 1962).

Article recommends that all prospective teachers become acquainted with programed instruction techniques.

Schramm, Wilbur. Programed Instruction, Today and Tomorrow. New York: The Fund for the Advancement of Education, 1962, 75 p.

Result of a study of the development of teaching machine and programed learning, with suggestions as to how a desirable rate and pattern of development might be encouraged.

Stolurow, Lawrence M. Teaching by Machine. Cooperative Research Monograph No. 6, OE-34010. Washington, D.C.: Government Printing Office, 1961, 173 p.

Stolurow--continued

Examines the potentialities of some of the auto-instructional materials as a possible resolution of some of today's critical problems in education.

Tanner, Daniel. "Technological Influences; Section 1. Automation in the Teaching-Learning Process," The Outlook in Student Teaching, 41st Yearbook of the Association for Student Teaching, p. 102-17, 1962. This yearbook and other publications of the Association may be secured from Dr. A. C. Moon, State College of Iowa, Cedar Falls.

Summary of recent developments in teaching machines and programed instruction. See also Raymond L. Klein in Section I, page 4.

Tyler, Fred T. "Teaching Machines, Programs, and Research on Learning," The School Review, 71:123-50 (Summer 1963).

Explores the effects of teaching machines and programed instruction on instruction and curriculum.

## 2) Multimedia Systems

Kersh, Bert Y. "The Classroom Simulator," Audiovisual Instruction, 6:447-8 (November 1961).

Author describes his project to create an audiovisual environment for practice teaching. Illustrated. See also USOE report, Section II-A, page 25.

____________. "The Classroom Simulator," Journal of Teacher Education, 13:109-10 (March 1962).

____________. "Simulation in Teacher Education," Programed Instruction, 2:3 (April 1963).

Morlan, J. E. "Cross-media Teaching," Educational Screen and Audiovisual Guide, 42:318 (June 1963).

Relates an experience of using a cross-media approach in teaching prospective teachers graphic arts techniques in a basic audiovisual course.

### 3) Computers

**Bushnell, Donald D.** "The Role of the Computer in Future Instructional Systems," Audiovisual Communication Review, 11:2, Supplement No. 7 (March-April 1963), 70 p.

A monograph from the NEA's Technological Development Project, this work deals with computer fundamentals, computer-based teaching machines, information retrieval systems in education, computer-based simulation, the automated classroom, plus a look at the future of computer applications to instruction.

________________ (editor). The Automation of School Information Systems, Monograph No. 1. Washington, D.C.: Department of Audiovisual Instruction, NEA, 1964, 134 p.

Brings together a wide range of school applications, instructional and otherwise, for electronic data processing equipment which is rapidly finding its way into our educational system.

**Smith, Gary R.** "A Computer Program for the Placement of Student Teachers," Journal of Teacher Education, 13:431-2 (December 1962).

Describes the Wayne State University computer program for scheduling of student teachers.

## SECTION I

### E. LANGUAGE - LEARNING LABORATORIES

Birkmaier, Emma Marie. "What's New in Teacher Education," Audiovisual Instruction, 7:624-6 (November 1962).

Discusses the upgrading of teacher competencies in modern foreign languages.

Hocking, Elton. The Language Laboratory and Language Learning: The State of the Art, Monograph No. 2. Washington, D.C.: Department of Audiovisual Instruction, NEA, 1964.

Definitive work on language laboratories -- past, present and future.

Keating, Raymond F. A Study of the Effectiveness of Language Laboratories. New York: Columbia University, Teachers College, Institute of Administrative Research, 1963, 61 p.

Critical preliminary evaluation of the medium based on a study of twenty-one school systems in the New York metropolitan area.

### F. PLANT DESIGN FOR EDUCATIONAL TECHNOLOGY

Educational Facilities Laboratories. Bricks and Mortarboards, A Report on College Planning and Building. New York: Educational Facilities Laboratories, Inc., 1964, 168 p.

Concerned with the problems of the expansion of the nation's colleges and universities amid the new procedures and new technologies currently reshaping the academic process.

______________________. To Build or Not to Build, A Report on the Utilization and Planning of Instructional Facilities in Small Colleges. New York: Educational Facilities Laboratories, Inc., 1962, 38 p.

Based on research at Michigan State University, data from over sixty liberal arts colleges are considered toward increasing the efficiency of use of existing space to make room for more students and reducing the quantity of new space to be built.

______________________. Design for ETV: Planning for Schools with Television. New York: Educational Facilities Laboratories, Inc., 1960, 96 p.

Educational Facilities Laboratories--continued

Well-illustrated report of an industrial design study concerned about the environment in which television could be employed most effectively.

________________. New Building on Campus; Six Designs for a College Communications Center. New York: Educational Facilities Laboratories, Inc., 1963, unpaged.

Six graphic interpretations attempting to define the optimum physical environment for advanced instructional techniques.

O'Melia, Pauline A. "Plant Planning Affects Use of Instructional Materials," Educational Leadership, 17:432-3, 436-8 (April 1960).

Contains a checklist of classroom facilities to promote better use of instructional materials.

## SECTION II

## U. S. OFFICE OF EDUCATION RESEARCH REPORTS

### A. EDUCATIONAL MEDIA BRANCH (NDEA, Title VII)

Allen, Paul and Edward Pomeroy. NATIONAL CONFERENCE ON TEACHER EDUCATION AND NEW MEDIA. American Association of Colleges for Teacher Education, Washington, D.C. (USOE Title VII Project No. B-084; report out-of-print; was not processed through University Microfilms.)

This report contains three working papers distributed prior to an invitational conference at the University of Michigan which cover the implications of new media technology upon the future of teacher education.

Beberman, Max (Principal Investigator) and Charles Van Horn (author of final report). A STUDY TO DETERMINE THE RELATIVE EFFECTIVENESS OF THE USE OF A SERIES OF FILMED DEMONSTRATIONS IN TEACHER EDUCATION FOR A NEW HIGH SCHOOL MATHEMATICS CURRICULUM. National Educational Television and Radio Center, New York, N.Y. (USOE Title VII Project No. 158; University Microfilms Pub. No. 63-2865)

To study the effectiveness in teacher education of filmed demonstrations of techniques for teaching high school algebra when compared with direct observation in the demonstration classroom.

*Biddle, Bruce J. THE IMPACT OF MEDIA ON THE SCHOOL AS AN INSTITUTION. University of Missouri, Columbus, Missouri. (USOE Title VII Project No. C-999)

To conceptualize a scheme for analyzing the social systems of the school to review and assess related research and to plan an integrated program of research on the school.

Bryan, Edward F. A COMPARATIVE STUDY IN THE TEACHING OF HIGH SCHOOL CHEMISTRY AND PHYSICS. Oklahoma State Department of Education, Oklahoma City, Oklahoma. (USOE Title VII Project No. 447; University Microfilms Pub. No. 62-2179)

To determine the level of student achievement in high school chemistry and physics through instruction by television plus correspondence courses, television plus assistance by college students preparing to teach, and

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*Throughout this section of the bibliography an asterisk indicates that the U.S. Office of Education had not received a final report from the project cited as of the date of this publication.

Bryan--continued
television plus both correspondence courses and assistance by college students preparing to teach. (See analytical review, Audiovisual Communication Review, 10:A-74, January-February 1962.)

Burkhart, James A. AN EXPERIMENT TO DETERMINE THE VALUES OF USING AMPLIFIED TELEPHONE INTERVIEWS WITH SIGNIFICANT PEOPLE TO ENRICH CERTAIN COLLEGIATE COURSES. The University of Texas, Austin, Texas. (USOE Title VII Project No. 250; University Microfilms Pub. No. 61-3612)

To determine whether amplified telephone interviews with significant people could enrich college courses. (See analytical review, Audiovisual Communication Review, 9:A-15, July-August 1961.)

Carpenter, C. R. OPERATIONAL PLANS FOR REGIONAL EDUCATIONAL MEDIA RESEARCH CENTERS WITH A PROGRAMMATIC ORIENTATION. Pennsylvania State University, University Park, Pennsylvania. (USOE Title VII Project No. C-1058; University Microfilms Pub. No. 63-2861)

To investigate the need for and the feasibility of establishing a complement of "Regional Educational Media Research Centers with a Programmatic Orientation." (See analytical review, Audiovisual Communication Review, 10:A-135, November-December 1962.)

DeBernardis, Amo, Victor Doherty and Errett Hummel. A GUIDE FOR PLANNING SCHOOL BUILDINGS FOR THE USE OF MODERN TEACHING AIDS. Portland State College, Portland, Oregon. (USOE Title VII Project No. B-007; report is available from the Government Printing Office, Pub. No. OE-21021, 50¢)

A guide to assist school board members, school superintendents and architects in planning school buildings so that teachers may make full and effective use of modern media of instruction. (See analytical review, Audiovisual Communication Review, 12:114, September 1964.)

Evans, Richard I. AN EXPERIMENT WITH THE USE OF A VIDEO TAPE RECORDER IN A PROGRAM DESIGNED TO IMPROVE COLLEGE LEVEL TEACHING TECHNIQUES. Title of final report: The University Faculty and Educational Television: Hostility, Resistance, and Change. University of Houston, Houston, Texas. (USOE Title VII Project No. 051; University Microfilms Pub. No. 63-2854)

To explore attitudes and values of university professors and conditions which may precipitate modification of their attitudes, especially their resistance to the use of instructional television. (See analytical review, Audiovisual Communication Review, 10:A-128, November-December 1962.)

Fulton, W. R. and Omer J. Rupiper. SELECTED VICARIOUS EXPERIENCES VERSUS DIRECT OBSERVATIONAL EXPERIENCES OF PRE-SERVICE TEACHERS IN THE FOUNDATION AREAS OF PROFESSIONAL PREPARATION AT THE UNIVERSITY OF OKLAHOMA. University of Oklahoma, Norman, Oklahoma. (USOE Title VII Project No. 102; University Microfilms Pub. No. 62-2180)

To determine whether the viewing of film and slide sequences which depict educational principles is as effective as direct classroom observation in providing observational experiences for pre-service teachers during their professional training prior to student teaching. (See analytical review, Audiovisual Communication Review, 10:A-75, January-February 1962.)

Hardaway, Charles W., C. Lawrence Beymer and William E. Engbretson. A STUDY OF ATTITUDINAL CHANGES OF TEACHERS AND PUPILS TOWARD EDUCATIONAL TELEVISION AND AN ANALYSIS OF ATTITUDES OF VARIOUS GROUPS TOWARD EDUCATIONAL TELEVISION. Indiana State College, Terre Haute, Indiana. (USOE Title VII Project No. 988; University Microfilms Pub. No. 64-770)

To study the effects of one year's utilization of the Midwest Airborne Television Instruction upon the attitudes of a selected sample of teachers and pupils at the elementary and secondary level. (See analytical review, Audiovisual Communication Review, 11:A-157, September-October 1963.)

Hunt, Lyman C., Jr. AN EXPERIMENT TO APPRAISE THE EFFECTIVENESS OF A TELEVISED PROGRAM SERIES ON READING INSTRUCTION DEVELOPED THROUGH THE INVOLVEMENT OF TEACHERS AND PARENTS. Pennsylvania State University, University Park, Pennsylvania. (USOE Title VII Project No. 209; University Microfilms Pub. No. 62-1077)

To determine whether or not a television series demonstrating procedures and practices pertaining to individualized reading instruction influenced teachers to incorporate such procedures and practices into their own classroom programs. (See analytical review, Audiovisual Communication Review, 9:A-47, November-December 1961.)

Johnson, F. Craig. AN INVESTIGATION OF MOTION PICTURE FILM AND THE PROGRAM ANALYZER FEEDBACK TO IMPROVE TELEVISION TEACHING TRAINING. Ohio University, Athens, Ohio. (USOE Title VII Project No. 374; University Microfilms Pub. No. 62-2181)

To evaluate the program analyzer, sound-on-film, and audio-tape as aids in training television teachers. (See analytical review, Audiovisual Communication Review, 10:A-76, January-February 1962.)

*Johnson, F. Craig. STUDENT RESPONSE TO LINEAR AND BRANCHING SEQUENCES IN CONVENTIONAL AND PROGRAMED TELEVISED INSTRUCTION. Ohio University, Athens, Ohio. (USOE Title VII Project No. 863)

To investigate the effects combinations of programed learning variables have on the amount students learn from conventional and programed televised instruction.

Johnston, Roland E., Jr. MAGNETIC RECORDINGS AND VISUAL DISPLAYS AS AIDS IN TEACHING INTRODUCTORY PSYCHOLOGY TO COLLEGE STUDENTS. Drexel Institute of Technology, Philadelphia, Pennsylvania. (USOE Title VII Project No. 240; University Microfilms Pub. No. 62-1078)

To determine how achievement in college classes taught by audiovisual presentations and discussions compared with that in classes taught by conventional methods using lectures, discussion and laboratory work. (See analytical review, Audiovisual Communication Review, 9:A-46, November-December 1961.)

*Keller, Robert J. THE EFFECTIVENESS OF CLOSED CIRCUIT TELEVISION IN TEACHER EDUCATION. University of Minnesota, Minneapolis, Minnesota. (USOE Title VII Project No. 077. Final report will be available in 1964.)

To study the relative advantages of observation in teacher education by closed-circuit television, use of kinescopes and direct observation (a) by determining combinations of observation procedures, if any, which have measurable effects upon the outcomes of teacher education and (b) identifying factors associated with optimal use of observation procedures under closed-circuit television and kinescope presentation.

Kersh, Bert Y. CLASSROOM SIMULATION: A NEW DIMENSION IN TEACHER EDUCATION. Teaching Research, Oregon State System of Higher Education, Monmouth, Oregon. (USOE Title VII Project No. 886; University Microfilms Pub. No. 64-4843)

(1) To develop the principles and skills required in the production of classroom simulation materials, and the techniques for using the procedure in the pre-service education of elementary school teachers; and (2) to conduct an experiment aimed at determining the need for "realism" (fidelity) in the simulation procedures used in teaching. (See analytical review, Audiovisual Communication Review, 12:119, Spring 1964.)

McIntyre, Kenneth M. A STUDY TO DETERMINE SPECIFIC SOURCES OF RESISTANCE TO THE USE OF AUDIOVISUAL MATERIALS BY COLLEGE AND UNIVERSITY TEACHERS AND THE DEVELOPMENT OF PROCEDURES FOR OVERCOMING THE BARRIERS TO OPTIMUM USE. University of North Carolina, Chapel Hill,

McIntyre--continued
North Carolina. (USOE Title VII Project No. 332; University Microfilms Pub. No. 64-4845)

To improve graphic communication techniques in large and small class instruction, with and without television, and to attempt to remove some barriers to optimum use.

McLuhan, H. Marshall. UNDERSTANDING MEDIA. National Association of Educational Broadcasters, Urbana, Illinois. (USOE Title VII Project No. 279; University Microfilms Pub. No. 61-3619)

To explain the character of a dozen media, illustrating the dynamic symmetries of their operation on man and society. (See analytical review, Audiovisual Communication Review, 9:A-25, July-August 1961.)

*Maccoby, Nathan. THE USE OF SOUND FILM RECORDINGS TO IMPROVE CLASSROOM COMMUNICATIONS. Stanford University, Stanford, California. (USOE Title VII Project No. 680)

(1) Studies cognitive non-verbal communication problems in classrooms through the analysis of sound-film recordings; and (2) investigates methods of training teachers in the more effective utilization of non-verbal information from students as a means of obtaining feedback on what is being communicated by teachers to students.

Myers, Lawrence, Jr. AN EXPERIMENTAL STUDY OF THE INFLUENCE OF THE SUPERIOR TEACHER USING TELEVISION AS A TRANSMISSION FACILITY. Syracuse University, Syracuse, New York. (USOE Title VII Project No. 161; University Microfilms Pub. No. 62-2619)

(1) To evaluate the effectiveness of the experienced college teacher in his televised lectures; (2) to investigate the kinds of educational objectives that superior teachers can accomplish in their televised lectures; (3) to investigate certain personal attributes of teachers that students can identify; and (4) to investigate the relationships between measures of student achievement and student attitudes toward televised instruction and their teachers. (See analytical review, Audiovisual Communication Review, 10:A-94, May-June 1962.)

Oliver, Garland E. A STUDY OF PRE-SERVICE TEACHER EDUCATION IN THE USE OF MEDIA OF MASS COMMUNICATION FOR CLASSROOM INSTRUCTION. University of Georgia, Athens, Georgia. (USOE Title VII Project No. 130; University Microfilms Pub. No. 64-755)

To ascertain what specific emphasis can be placed on the effective use of various types of instructional media during the teacher education program

Oliver--continued
so that a difference will result in the selection and utilization of these media in teaching. (See analytical review, Audiovisual Communication Review, 11:A-162, September-October 1963.)

Oxhandler, Eugene K. and Walter J. Mars. INSTRUCTIONAL MATERIALS FOR TEACHING AUDIO-VISUAL COURSES. Syracuse University, Syracuse, New York. (USOE Title VII Project No. B-142. Copies of this report are available from the Educational Media Branch of the U.S. Office of Education.)

Report is an annotated list of motion pictures, kinescopes, filmstrips, slide-sets, recordings and tapes.

Painter, William I. PRODUCTION AND USE OF CLASSROOMS ON FILM VERSUS TRADITIONAL OBSERVATIONS IN TEACHER EDUCATION. University of Akron, Akron, Ohio. (USOE Title VII Project No. 127; University Microfilms Pub. No. 62-2182)

To determine the practicability of using films of typical school performance in lieu of direct classroom visitation by the student as an effective way of making a professional course in educational psychology meaningful. (See analytical review, Audiovisual Communication Review, 10:A-77, January-February 1962.)

Patrick, Robert B. THE MEASUREMENT OF THE EFFECTIVENESS OF THE DOCUMENTARY SOUND-FILM AS A SUPPLEMENT IN THE TEACHING OF METHODS TO COLLEGE STUDENTS BEING PREPARED TO TEACH IN THE SECONDARY SCHOOLS. Pennsylvania State University, University Park, Pennsylvania. (USOE Title VII Project No. 217; University Microfilms Pub. No. 64-756)

(1) To determine if the viewing of documentary sound films will increase undergraduate students' understanding of the teaching process and if they consider their method of presentation superior to other techniques; and (2) to determine if performance was higher for student teachers who experienced the sound film technique of teaching methods. (See analytical review, Audiovisual Communication Review, 11:A-162, September-October 1963.)

Patrick, Robert B. THE EFFECTIVENESS OF THE DOCUMENTARY SOUND-FILM AS A SUPPLEMENT IN SECONDARY TEACHER EDUCATION. Pennsylvania State University, University Park, Pennsylvania. (USOE Title VII Project No. 868; University Microfilms Pub. No. 64-4836)

To determine whether films can assist in teaching skills, attitudes and understandings in secondary teacher education. (See analytical review, Audiovisual Communication Review, 12:123, Spring 1964.)

Popham, James W. AN EXPERIMENTAL APPRAISAL OF THE EFFECTIVENESS OF PRE-TAPED LECTURES FOR COLLEGE EXTENSION CLASSES. San Francisco State College, San Francisco, California. (USOE Title VII Project No. 470; University Microfilms Pub. No. 62-2184)

To study the effectiveness of tape recorded lectures at the college level as a principal method of instruction. (See analytical review, Audiovisual Communication Review, 10:A-78, January-February 1962.)

Popham, James W. AN EXPERIMENTAL EVALUATION OF TAPE RECORDED LECTURES IN THE COLLEGE CLASSROOM. Kansas State Teachers College, Pittsburg, Kansas. (USOE Title VII Project No. 474; University Microfilms Pub. No. 61-3617)

To determine the effectiveness of teaching a graduate level college course in education research methods with a series of tape recorded lectures. (See analytical review, Audiovisual Communication Review, 9:A-27, July-August 1961.)

Ramsey, Curtis P. A RESEARCH PROJECT FOR THE DEVELOPMENT OF A SCALE TO MEASURE ATTITUDES REGARDING THE USE OF NEWER EDUCATIONAL MEDIA. George Peabody College, Nashville, Tennessee. (USOE Title VII Project No. 492; University Microfilms Pub. No. 62-2620)

To devise an instrument to assess attitudes toward the uses of newer media for instruction. (See analytical review, Audiovisual Communication Review, 10:A-95, May-June 1962.)

Rogers, William R. TELEVISION UTILIZATION IN THE OBSERVATION PROGRAM FOR TEACHER EDUCATION. San Jose State College, San Jose, California. (USOE Title VII Project No. 093; University Microfilms Pub. No. 64-4919)

To determine whether or not by the use of television the program of in-person observation in the public schools required for teacher education candidates could be reduced. (See analytical review, Audiovisual Communication Review, 12:124, September 1964.)

Schramm, Wilbur. EDUCATION AND THE NEW MEDIA (AN EXPLORATION OF NEEDED RESEARCH IN EDUCATIONAL USE OF THE NEW MEDIA). Stanford University, Stanford, California. (USOE Title VII Project No. B-017; University Microfilms Pub. No. 64-763.) Title of final report: New Teaching Aids for the American Classroom.

This report consists of papers by behavioral scientists relating to the contributions research could make to the understanding and use of the newer instructional media.

Schramm, Wilbur. EDUCATIONAL TELEVISION: THE NEXT TEN YEARS. Stanford University, Stanford, California. (USOE Title VII Project No. B-017a; University Microfilms Pub. No. 64-764.)

This report consists of (a) papers by ETV and communications specialists designed to look at the future of educational television in a general way, (b) the testimony of a number of "distinguished and informed" citizens on the problems and potential of television before the U.S. Office of Education Educational Media Study Panel and (c) a report and recommendations by the panel.

Schueler, Herbert, Milton J. Gold and Harold E. Mitzel. THE USE OF TELEVISION FOR IMPROVING MEASURES OF STUDENT-TEACHING PERFORMANCE, PHASE I. Hunter College, New York, New York. (USOE Title VII Project No. 068. Report has not been processed by University Microfilms to date.)

Sought to evaluate the contribution of kinescope recordings to growth by student teachers, particularly the extent to which a video-recording of a student teacher's performance will (1) assist in describing, interpreting and assessing the quality of a teaching performance; (2) improve the student teacher's self-awareness of his strengths and weaknesses and accelerate his progress as a teacher; (3) assist the objectives of the supervisory process.

*Schueler, Herbert and Gerald S. Lesser. PREPARATION OF A MANUSCRIPT ON NEW MEDIA FOR TEACHER EDUCATION. Hunter College, New York, New York. (USOE Title VII Project No. B-304. Report will be available in 1964.)

A monograph to describe a theoretical structuring of the problem area, assess existing evidence and suggest directions for future research and applications of the new instructional media.

Secrest, James D. (Principal Investigator) and Alfred S. Hayes (author of final report). A TECHNICAL GUIDE FOR THE PURCHASE AND USE OF LANGUAGE LABORATORY FACILITIES AND EQUIPMENT. Title of final report: Language Laboratory Facilities: Technical Guide for the Selection, Purchase, Use, and Maintenance. (USOE Title VII Project No. B-143; University Microfilms Pub. No. 64-751. Report also available from the U.S. Government Printing Office, Pub. No. OE-21024; price, 50¢.)

Seibert, W. F. and J. L. Senn. A STUDY OF MOTION PICTURES IN EDUCATIONAL AND PSYCHOLOGICAL TESTING. Purdue Research Foundation, Lafayette, Indiana. (USOE Title VII Project No. 991. Not processed by University Microfilms to date.)

To examine the unique uses of motion pictures in the measurement of higher order mental abilities and emotional-social behavior.

**Smith, M. Daniel.** NEW INSTRUCTIONAL MEDIA: SELF INSTRUCTION, GUIDED INSTRUCTION, AND THE ROLE OF THE TEACHER. Earlham College, Richmond, Indiana. (USOE Title VII Project No. 143; University Microfilms Pub. No. 64-4920)

To develop college-level programed material and media for their presentation and to observe their effects on the curriculum.

**Stanley, Julian C.** PREPARATION OF A GUIDE TO THE PREPARATION OF TEACHERS TO EVALUATE THE USE OF EDUCATIONAL MEDIA. University of Wisconsin, Madison, Wisconsin. (USOE Project No. B-232. Report will not be available through University Microfilms. See Section II-C for list of libraries where copies are available.)

To design a course to prepare competent classroom teachers to perform respectable media research.

**Stoller, Nathan and Gerald S. Lesser.** THE USE OF TELEVISION FOR IMPROVING TEACHER TRAINING AND FOR IMPROVING MEASURES OF STUDENT-TEACHING PERFORMANCE, PHASE II. Hunter College, New York, New York. (USOE Title VII Project No. 068; University Microfilms Pub. No. 64-4840)

A library of kinescope films of experienced elementary school teachers was built, serving as curriculum materials in "Methods in Education" courses. An experimental attempt was made to measure the effectiveness of the kinescope film for college instructional purposes. Comparisons of college classroom learning were made among classes using kinescope materials, observing via closed-circuit television and observing teachers in their actual classrooms.

**Tintera, James B.** ANALYSIS OF METHODS IN WHICH APPLICATION OF NEW COMMUNICATIONS MEDIA MAY IMPROVE TEACHER PREPARATION IN LANGUAGE, SCIENCE, AND MATHEMATICS. Michigan State University, East Lansing, Michigan. (USOE Title VII Project No. 008E; University Microfilms Pub. No. 64-4837)

A study of the effectiveness of three student teaching critique methods: (1) conventional supervisor, observation and conference; (2) supervisor observation supplemented by voice tape recordings which are used in conference; and (3) supervisor observation with kinescopes of student teacher performance used in conference.

***Torkelson, G. M.** AN EXPERIMENTAL STUDY OF PATTERNS FOR IMPROVING THE PREPARATION OF PRE-SERVICE TEACHERS IN THE USE OF AUDIO-VISUAL MATERIALS AND THE EFFECTS OF OPTIMAL USE OF AUDIO-VISUAL MATERIALS UPON PUPIL LEARNING AND TEACHER USE.

Torkelson--continued
Pennsylvania State University, University Park, Pennsylvania. (USOE Title VII Project No. 079. Report will be available in 1964.)

The basic audiovisual course was presented by four different patterns: (a) separate course; (b) integrated with subject methods in the elementary and secondary curriculum; (c) on location as part of the student teaching experience; and (d) by self-instructional programing. Conclusions based on a two-year follow-up of Project graduates will make comparisons between (1) types of training and extent of utilization in teaching; and (2) relationship of availability of audiovisual materials and facilities to teacher performance.

VanderMeer, A. W. REGIONAL RESEARCH CONFERENCE ON NEW EDUCATIONAL MEDIA. Title of final report: Newer Educational Media. Pennsylvania State University, University Park, Pennsylvania. (USOE Title VII Project No. B-083d; University Microfilms Pub. No. 64-757)

This report contains eight papers of a group of key leaders in research, school administration and teacher education, brought together for the purpose of exchanging views and information on the characteristics and uses of newer educational media. See particularly the G. M. Torkelson paper on the implications of research in newer educational media for the role of the teacher and for teacher education.

Wedberg, Desmond P. A COMPARATIVE INVESTIGATION OF THE INSTRUCTIONAL AND ADMINISTRATIVE EFFICIENCY OF VARIOUS OBSERVATIONAL TECHNIQUES IN THE INTRODUCTORY COURSE IN EDUCATION. University of Southern California, Los Angeles, California. (USOE Title VII Project No. 685; University Microfilms Pub. No. 64-767)

To compare the relative effectiveness of three different classroom observational procedures by teacher education students. (See analytical review, Audiovisual Communication Review, 11:A-170, September-October 1963.)

Wittich, Walter A. EVALUATION OF WAYS OF TRAINING TEACHERS TO IMPROVE DAY-TO-DAY CLASSROOM LEARNING ACTIVITIES THROUGH USES OF AUDIOVISUAL MEDIA. Title of final report: Off-Camera: A Pictorial Glimpse of AV-TV. University of Wisconsin, Madison, Wisconsin. (USOE Title VII Project No. 015; University Microfilms Pub. No. 63-2867)

To study the effectiveness of a series of televised lessons designed for in-service teacher education to promote attitudes favorable toward audiovisual instruction and to improve teaching practices in the use of audiovisuals. (See analytical review, Audiovisual Communication Review, 10:A-141, November-December 1962.)

## SECTION II

## B. COOPERATIVE RESEARCH PROGRAM

Della-Piana, Gabriel M. AN EXPERIMENTAL EVALUATION OF MACHINE: THE EFFECT OF CERTAIN LEARNING OUTCOMES OF VARIATIONS IN MOTIVATIONAL CHARACTERISTICS OF THE LEARNER AND THE FORM OF THE LEARNER'S RESPONSES. Title of final report: An Experimental Evaluation of Programed Learning: Motivational Characteristics of the Learner, His Responses, and Certain Learning Outcomes. University of Utah, Salt Lake City, Utah. (Coop. Res. Proj. No. 864)

(1) To determine whether the reinforcement value of seeing that one's answer is correct is more effective in facilitating learning among high achievement-oriented students or low achievement-oriented ones, and (2) to investigate the effectiveness of various forms of learner response in promoting recall of meaningful material.

Fattu, Nicholas A. PROBLEM-SOLVING PERFORMANCE OF ELEMENTARY SCHOOL TEACHERS ON PROFESSIONAL CRITERIA. Indiana University, Bloomington, Indiana. (Coop. Res. Proj. No. 419)

(1) To develop an instrument for assessing the performance of elementary school teachers in solving problems which represent valid professional tasks for such a group; and (2) to study the effects of change in controlled conditions upon characteristic problem-solving processes of elementary school teachers.

Flanders, Ned A. THE EFFECTS OF DIRECT AND INDIRECT TEACHER INFLUENCE ON LEARNING. University of Minnesota, Minneapolis, Minnesota. (Coop. Res. Proj. No. 397)

(1) To investigate the effect of direct and indirect teacher influence on the learning of gifted, average and slow students, and students who could be classed as dependent compared with those who are more independent; (2) to investigate the relation of the learning task to the type of influence required to be exercised by the teacher; and (3) to identify the periods, if any, in the over-all cycle of classroom learning at which direct or indirect teacher influence is most effective.

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*Throughout this section of the bibliography an asterisk indicates that the U. S. Office of Education had not received a final report from the project cited as of the date of this publication.

*Gerbner, George. MASS COMMUNICATIONS AND POPULAR CONCEPTIONS OF EDUCATION: A CROSS CULTURAL STUDY. University of Illinois, Urbana, Illinois. (Coop. Res. Proj. No. 876)

(1) To discover what portrayals of teacher and teaching each national system of communication makes available for mass consumption, and (2) to determine what forces, pressures, controls and professional relationships affect these portrayals.

*Glaser, Robert. THE TECHNOLOGY OF PROGRAMMED INSTRUCTION AND ITS IMPACT UPON AN EDUCATIONAL SYSTEM. University of Pittsburgh, Pittsburgh, Pennsylvania. (Coop. Res. Proj. No. 1343; will not be completed until September 1966.)

(1) To develop programed learning techniques on the basis of the applicability of the findings of experimental psychology to programed instructional procedures; and (2) to investigate in a major school system the impact of programed instruction upon the student, the teacher, the curriculum and the educational structure.

Kelly, J. T. and J. B. White. FLORIDA STUDY OF TEACHER EDUCATION: AN EVALUATION OF THE PRE-SERVICE PROGRAM. University of Florida, Gainesville, Florida. (Coop. Res. Proj. No. 156)

To discover how teachers feel about their pre-service education; to identify how school principals feel about the pre-service training programs of their teachers; and to suggest how pre-service training might be improved.

*Lambert, Philip. CLASSROOM INTERACTION, PUPIL ACHIEVEMENT AND ADJUSTMENT IN TEAM TEACHING AS COMPARED WITH THE SELF-CONTAINED CLASSROOM. University of Wisconsin, Madison, Wisconsin. (Coop. Res. Proj. No. 1391)

To compare the effect of a multigrade team-teaching organization with the effect of a traditional self-contained classroom organization on classroom interaction, school achievement and school adjustment.

Smith, B. Othanel and Milton Muex. THE LOGICAL STRUCTURE OF TEACHING AND THE DEVELOPMENT OF CRITICAL THINKING. Title of final report: Logic of Teaching. University of Illinois, Urbana, Illinois. (Coop. Res. Proj. No. 258)

(1) To develop procedures by which teachers can be more effective in improving the ability of students in critical thinking; and (2) to discover what teachers themselves should be taught to assist them in influencing the ability of their students in the area of critical thinking.

Stake, Robert E. THE EFFECT OF TELEVISION INSTRUCTION ON INDIVIDUAL LEARNING CURVES. University of Nebraska, Lincoln, Nebraska. (Coop. Res. Proj. No. 573)

(1) To demonstrate that parameters of learning curves can be used effectively as multi-dimensional indices of academic learning activities; and (2) to provide an incremented record of certain learning activities which are mediated by the television instructor rather than the classroom instructor.

Standlee, Lloyd S. AN INVESTIGATION OF THE PROFESSIONAL PREPARATION AND PERFORMANCE OF STUDENTS GRADUATING FROM TEACHER TRAINING INSTITUTIONS IN INDIANA. Indiana University, Bloomington, Indiana. (Coop. Res. Proj. No. 309)

(1) To what extent does teacher preparation with regard to coursework, labwork and student teaching differ in different types and sizes of teacher training institutions? (2) Are there differences in attitude toward teaching held by graduates of different types and sizes of training institutions? (3) Are there differences in the way administrators evaluate the performances of graduates of different kinds of institutions? (4) Are there initial differences among the students who seek to enter the different types and sizes of teacher training institutions?

Van Riper, Charles. AN INVESTIGATION OF DIFFERENTIAL BIAURAL STIMULATION IN THE TEACHING OF FOREIGN LANGUAGES. Western Michigan University, Kalamazoo, Michigan. (Coop. Res. Proj. No. 739)

To determine the effect that hearing simultaneously the teacher's voice in one ear and his own voice in the other will have on a student's ability to compare the differences in pronunciation.

Wilk, Roger E. A STUDY OF THE RELATIONSHIP BETWEEN THE OBSERVED CLASSROOM BEHAVIORS OF ELEMENTARY STUDENT TEACHERS, PREDICTORS OF THOSE BEHAVIORS, AND RATINGS BY SUPERVISORS. University of Minnesota, Minneapolis, Minnesota. (Coop. Res. Proj. No. 473)

(1) To investigate the relationship between ratings of classroom behavior of student teachers by trained observers and the judgment of student counselors in relation to probable success made at the time of college entrance; (2) to compare the ratings of classroom behavior by trained observers using a standardized observation instrument and those of student teaching supervisors; and (3) to investigate the relation of placement factors on the ratings of classroom effectiveness.

## SECTION II

## C. SOURCES FOR USOE REFERENCES

### Purchase of Reports:

Full reports of completed projects under Title VII of the National Defense Education Act are available on microfilm for 1-1/4 cents per page (minimum charge, $2.75), or 5-1/2 by 8 inch pages by xerography for 4-1/2 cents per page (minimum charge, $3). Orders should be sent to University Microfilms, Inc., 313 North First Street, Ann Arbor, Michigan; cite the order number listed in the reference to each project report.

Copies of Cooperative Research reports are available from the Library of Congress Photoduplication Service. Microfilmed copies of reports cost approximately $2.25. Photocopies are also available, usually at a greater cost. Address all requests for microfilm or photocopies to the Photoduplication Center, Library of Congress, Washington, D.C. Indicate "Cooperative Research Program Project ______," giving the project number, title and author.

### Summaries of Reports:

The Educational Media Branch of the U.S. Office of Education has contracted with Audiovisual Communication Review (published by the Department of Audiovisual Instruction, NEA) to abstract reports of completed Title VII, NDEA projects. To date these abstracts have been published in seven installments and are available at 35 cents each from the Publications Sales Division, National Education Association, 1201 Sixteenth Street, N.W., Washington, D.C. 20036. Payment must accompany an order totaling less than $2. Bulk supplies of installments are available at 20 percent discount for more than ten copies; and 10 percent discount on two to ten copies.

Brief summaries of completed Cooperative Research Program project reports are available on request from the Cooperative Research Branch, Office of Education, U.S. Department of Health, Education and Welafre, Washington, D.C. 20202.

The Science Information Exchange of the Smithsonian Institution has brief summaries of proposed work for both Title VII of the NDEA and Cooperative Research Program projects of the U.S. Office of Education. Copies of these summaries are available to scientific personnel with research associations. The mailing address is: Science Information Exchange, 300 Madison National Bank Building, 1730 M Street, N.W., Washington, D.C. 20036.

## Inter-Library Loan:

Through the Documents Expediting Project of the Library of Congress, full reports of completed projects under both Title VII and the Cooperative Research Program are available on inter-library loan from the institutions listed below:

### ALABAMA

University of Alabama Library, Reference Department, University

### ARIZONA

Matthews Library, Arizona State University, Tempe
University of Arizona, Tucson

### CALIFORNIA

The General Library, University of California, Berkeley 4
The Hannold Library, Documents Department, Claremont
Long Beach State College, Long Beach 4
University of California Library, Government Publications Room, L.A. 24
Library, University of Southern California, Los Angeles 7
Los Angeles State College Library, Los Angeles 32
California State Library, Documents Division, Sacramento 9
San Diego State College Library, San Diego 15
Cubberley Education Library, Stanford University, Stanford

### COLORADO

University of Colorado Libraries, Boulder
Library, Colorado State College, Greeley

### DISTRICT OF COLUMBIA

Library of Congress, Washington 25

### FLORIDA

Documents Division, University of Florida Libraries, Gainesville
Florida State University, Tallahassee

### GEORGIA

University of Georgia Libraries, Documents Section, Athens

### HAWAII

University of Hawaii Library, Government Documents, Honolulu

### ILLINOIS

Midwest Inter-Library Center, 5721 Cottage Grove Avenue, Chicago 37
University of Chicago Library, Documents Librarian, Chicago 37

### ILLINOIS--continued

Northwestern University Library, Documents Division, Evanston
University of Illinois Library, Gift and Exchange, Urbana

### INDIANA

Indiana University Library, Documents Librarian, Bloomington
Indiana State Library, 140 North Senate Avenue, Indianapolis 4
Purdue University Library, Documents Librarian, Lafayette
Ball State Teachers College, Muncie
Indiana State Teachers College, Director of Libraries, Terre Haute

### KANSAS

University of Kansas Library, Documents Librarian, Lawrence

### MARYLAND

Enoch Pratt Free Library, Documents Librarian, Baltimore 1
Johns Hopkins University Library, Baltimore 18
Curriculum Laboratory, Educational Services Section, Montgomery County Board of Education, Washington Street, Rockville

### MASSACHUSETTS

Harvard University Library, Graduate School of Education, Cambridge 38
Library, Lesley College, Cambridge 38
School of Education Library, Boston College, Chestnut Hill 67

### MICHIGAN

University of Michigan Library, Documents Librarian, Ann Arbor
Detroit Public Library, 5201 Woodward Avenue, Detroit 2
Wayne State University Library, Detroit 2
Michigan State University Library, Documents, East Lansing
Eastern Michigan University, Ypsilanti

### MINNESOTA

University of Minnesota Library, Documents Division, Minneapolis 14

### MISSISSIPPI

Library, Mississippi Southern College, P.O. Box 53, Station A, Hattiesburg

### MISSOURI

University of Missouri Library, Serials Department, Columbia
Kansas City Public Library, Documents Division, Ninth and Locust Streets, Kansas City

### NEBRASKA

University of Nebraska Library, Documents Librarian, Lincoln 8

## NEW HAMPSHIRE
Dartmouth College Library, Reference Department, Hanover

## NEW JERSEY
Rutgers University Library, Periodical Department, New Brunswick
Princeton University Library, Documents Librarian, Princeton

## NEW YORK
New York State Library, Gift and Exchange, Albany 1
Brooklyn College Library, Brooklyn 10
Brooklyn Public Library, Grand Army Plaza, Brooklyn 17
Cornell University Library, Government Documents, Ithaca
Columbia University Libraries, 535 West 114th Street, New York 27
New York Public Library, Fifth Ave. and 42nd Street, New York 18
United Nations Library, Acquisitions Unit, New York
Syracuse University Library, Serials Division, Syracuse 10

## NORTH CAROLINA
University of North Carolina, Chapel Hill
Duke University Library, Documents Librarian, Durham
North Carolina State College, D.H. Hill Library, Raleigh

## OHIO
Ohio State University Libraries, Serial Division, 1858 Neil Ave., Columbus 10
Kent State University Library, Documents Librarian, Kent
Miami University Library, Document Librarian, Oxford

## OKLAHOMA
Oklahoma State Library, 109 State Capitol, Oklahoma City 5
Oklahoma State University Library, Documents Librarian, Stillwater

## PENNSYLVANIA
Lehigh University Library, Bethlehem
The Pennsylvania State Library, Technical Services, Rm. 46, Box 1601, Harrisburg
Free Library of Philadelphia, Public Documents, Philadelphia 3
American Institute for Research, 410 Amberson Avenue, Pittsburgh 32
Carnegie Library of Pittsburgh, Reference Department, Pittsburgh 13
Pennsylvania State University Library, Documents, University Park

## RHODE ISLAND
Brown University Library, Documents Division, Providence 12

## SOUTH CAROLINA
Education Library, University of South Carolina, Columbia 1

**TENNESSEE**

University of Tennessee Library, Documents Librarian, Knoxville 16
Joint University Libraries, Nashville

**TEXAS**

Dallas Public Library, Documents Librarian, Dallas
Texas Christian University, Mary Couts Burnett Library, Fort Worth 29

**UTAH**

Brigham Young University, Documents Section, Provo
Library Periodical Room, University of Utah, Salt Lake City

**VIRGINIA**

University of Virginia Library, Public Documents, Charlottesville

**WASHINGTON**

University of Washington Library, Documents Librarian, Seattle 5

**WISCONSIN**

Milwaukee Public Library, 814 West Wisconsin Avenue, Milwaukee

**WYOMING**

University of Wyoming Library, Laramie

## SECTION III

## GENERAL REFERENCES IN INSTRUCTIONAL TECHNOLOGY AND BASIC AUDIOVISUAL TEXTS

Bereday, George Z. and Joseph A. Lauwerys (editors). Communication Media and the School: The Yearbook of Education, 1960. Tarrytown-on-Hudson, New York: World Book Company, 1960, 592 p.

Authorities around the world give attention to the communications media and their role in education. Sections include: theoretical and social implications; inventions and research developments; area studies; and case studies.

Bern, Henry A. "New Directions in Audio-Visual Communications: Toward Educational Engineering," Bulletin of the School of Education, 36:4-19 (November 1960).

The implications of educational engineering for improved audiovisual communication are discussed. Findings include the engineering origin of recent theories of audiovisual communication and the influence of human engineering research upon audiovisual research.

Brickell, Henry M. Organizing New York State for Educational Change: A Study of the Dynamics of Instructional Change in the Elementary and Secondary Schools of New York State with Recommendations for Improved Organization. Albany, New York: State Education Department, 1961, 107 p.

Report of a 1961 statewide study designed to (1) evaluate new practices and devices; (2) initiate and expand constructive experimentation in the schools; and (3) facilitate and accelerate widespread use of practices and devices which have been proved or may be proved successful in the schools of New York State and elsewhere.

Brown, James W., Richard B. Lewis and Fred F. Harcleroad. A-V Instruction Materials and Methods. New York: McGraw-Hill Book Company, Inc., 1959, 554 p.

Basic text to help prospective and practicing teachers to become better acquainted with the broad range and inter-related uses of audiovisual instructional materials and techniques.

Cross, A. J. Foy and Irene F. Cypher. Audio-Visual Education. New York: Thomas Y. Crowell Company, 1961, 415 p.

Basic text planned to be of sound practical help to the professional educator directing a college-level course, as well as to the teacher in the classroom

Cross and Cypher--continued
and to instructors in educational projects within industry and all forms of adult education.

Dale, Edgar. Audio-Visual Methods in Teaching, Revised Edition. New York: Holt, Rinehart and Winston, 1954, 534 p.

Basic text about the use of audiovisual materials in teaching.

deKieffer, Robert and Lee W. Cochran. Manual of Audio-Visual Techniques. Englewood Cliffs, New Jersey: Prentice-Hall, 1962, 254 p.

Workbook for audiovisual methods courses designed to complement the basic texts in the field.

Eboch, Sidney C. Operating Audio-Visual Equipment. San Francisco: Chandler Publishing Company, 1960, 73 p.

A manual describing technical features and operating principles of classroom audiovisual equipment, designed for methods courses as a supplement to basic audiovisual texts.

Ely, Donald P. (editor). The Changing Role of the Audiovisual Process in Education: A Definition and A Glossary of Related Terms, Supplement No. 6, Audiovisual Communication Review (January-February 1963). Washington, D.C.: Department of Audiovisual Instruction, NEA, 156 p.

Defines approximately 900 key terms relating to instructional technology.

Brickson, Carlton W. H. Administering Audio-Visual Services. New York: The Macmillan Company, 1959, 479 p.

Basic text for the preparation of media specialists.

Finn, James D. The Audio-Visual Equipment Manual. New York: Holt, Rinehart and Winston, Inc., 1957, 363 p.

Basic self-teaching reference for those utilizing audiovisual equipment.

Finn, James D., Donald G. Perrin and Lee E. Campion. Studies in the Growth of Instructional Technology, I; Audio-Visual Instrumentation for Instruction in the Public Schools, 1930-1960, A Basis for Take-Off. Technological Development Project, Occasional Paper No. 6. Washington, D.C.: Department of Audiovisual Instruction, NEA, 1962, 108 p.

Analysis of the acquisition of certain types of technological equipment by the public school system and relationship to the emerging patterns of thought concerning economic growth.

Harris, Chester W. (editor). Encyclopedia of Educational Research, American Educational Research Association, third edition. New York: The Macmillan Company, 1960, 1564 p.

See section "Audio-Visual Education," pages 115-37, edited by William H. Allen. Definitive summary of educational media research to 1958, plus 320 bibliographic references.

Kinder, James. Audio-Visual Materials and Techniques, second edition. New York: American Book Company, 1958, 592 p.

Well-illustrated basic text in audiovisual methods.

Review of Educational Research, Special Issue on Educational Media and Technology, 32:115-211 (April 1962).

Reviews the literature for a six-year period since the issuance of 26:125-56 (April 1956).

Thomas, R. Murray and Sherwin G. Swartout. Integrated Teaching Materials. New York: Longmans, Green and Company, 1960, 545 p.

Basic text on the use of audiovisual and printed materials in schools.

Tomorrow's Teaching: A Symposium. Oklahoma City, Oklahoma: Frontiers of Science Foundation of Oklahoma, Inc., 1962, 112 p.

Fourteen papers by national authorities presenting their views of the nature and the impact of the great technological changes now appearing in education.

Trow, William Clark. Teacher and Technology: New Designs for Learning. New York: Appleton-Century-Crofts, 1963, 198 p.

Considers the need for instructional media and possibilities of grouping the various media into a common-sense pattern of instruction which is workable and which will do a bettter educational job than could otherwise be done.

Wittich, Walter Arno and Charles Francis Schuller. Audio-Visual Materials, Their Nature and Use. New York: Harper and Brothers, 1957, 570 p.

Basic text on the why, what and how of audiovisual materials.

## SECTION IV

## NEW EDUCATIONAL MEDIA
## GUIDES, DIRECTORIES AND BIBLIOGRAPHIES

The Audio-Visual Equipment Directory, tenth edition. Fairfax, Virginia: National Audio-Visual Association, 1964, 335 p.

A fully illustrated guide to some 2000 current models of projectors, recorders and all other types of audiovisual equipment. Includes specifications, photographs and prices. Revised annually.

The AV Index: A Guide to Instructional Material Information in Selected Publications. Detroit, Michigan: Audio-Visual Research Institute, 1961, 52 p.

An index to 1786 selected references, designed in two parts: (1) Audio-visual information, including articles on audiovisual tools, materials and procedures; and (2) audiovisual information in subject areas. The index is designed to be a resource for both pre-service and in-service teachers.

Dewey, Richard H. Selected Bibliography on Instructional Television. Redwood City, California: Ampex Corporation, 1963, 11 p.

Bibliography contains 74 annotated references.

The Educational Media Index. New York: McGraw-Hill Book Company, 1964.

See especially Volume 7, Guidance, Psychology and Teacher Education. Includes materials for both pre-service and in-service teacher education.

Instructional Materials for Teaching Audiovisual Courses. Syracuse, New York: Syracuse University Audiovisual Center, 1961, 74 p.

An annotated list of motion pictures, kinescopes, filmstrips, slidesets, recordings and tapes. See Oxhandler and Mars, Section II-A, page 27.

Moldstad, John A. Sources of Information on Educational Media, U.S. Office of Education Bulletin 1963, No. 2, OE-34024. Washington, D.C.: U.S. Government Printing Office, 1963, 29 p.

Guide to assist educators in locating sources of information leading to the more effective use of educational media in teaching and learning situations.

Rufsvold, Margaret I. and Carolyn Guss. Guides to Newer Educational Media. Chicago, Illinois: American Library Association, 1961, 74 p.

Lists catalogs, professional journals and services of professional organizations which systematically provide information on the newer educational media.

# SECTION V

## REFERENCES PERTINENT TO CURRENT TEACHER PREPARATION CURRICULUM REVISION

Bellack, Arno A. (editor). Theory and Research in Teaching. New York: Bureau of Publications, Teachers College, Columbia University, 1963, 122 p.

Bellack, Arno A., Joel R. Davitz in collaboration with Herbert M. Kliebard and Ronald T. Hyman. The Language of the Classroom: Meanings Communicated in High School Teaching. New York: Institute of Psychological Research, Teachers College, Columbia University, 1963.

Berman, Louise M. (editor). The Nature of Teaching: Implications for the Education of Teachers. Milwaukee, Wisconsin: The Edward A. Uhrig Foundation, 1962, 109 p.

Bloom, Benjamin S. (editor). Taxonomy of Educational Objectives: The Classification of Educational Goals. Handbook I; Cognitive Domain. New York: Longmans, Green and Company, 1956, 207 p.

Broudy, Harry S. "The Education of Teachers of Teachers," The Journal of Teacher Education, 13:284-91 (September 1962).

Broudy, Harry S., B. Othanel Smith and Joe R. Burnett. Democracy and Excellence in American Secondary Education: A Study in Curriculum Theory. Chicago, Illinois: Rand McNally and Company, 1964, 302 p.

Changes in Teacher Education: An Appraisal. (Report of the NCTEPS Columbus Conference, 1963.) Washington, D.C.: National Commission on Teacher Education and Professional Standards, 1963, 522 p.

Charters, W. W. and Douglas Waples. The Commonwealth Teacher-Training Study. Chicago, Illinois: The University of Chicago Press, 1929, 666 p. (out-of-print; not available from publisher)

Chase, Francis S. "Some Effects of Current Curriculum Projects on Educational Policy and Practice," The School Review, 70:132-47 (Spring 1962).

Clark, David L. and Frederick R. Cyphert. Teacher Behavior as a Conceptual Base for the Professional Education of Teachers. Address given to a meeting of the Advisory Council, Associated Organizations for Teacher Education. Columbus, Ohio: The Ohio State University, 1963, 17 p. (mimeographed).

The Commission on Teacher Education. Teacher Competence: Its Nature and Scope. Burlingame, California: California Teachers Association, 1957, 48 p.

Denemark, George W. (chairman and editor). Criteria for Curriculum Decisions in Teacher Education: A Report from the ASCD Commission on Teacher Education. Washington, D.C.: Association for Supervision and Curriculum Development, 1963, 58 p.

Foshay, Finette P. (editor). Interaction in Learning: Implications for Television. A report of a seminar held at the NEA headquarters, January 31- February 3, 1959. Washington, D.C.: Division of Audiovisual Instructional Service, NEA, 1959, 64 p.

Frazier, Alexander and Harold E. Wigren (editors). Opportunities for Learning: Guidelines for Television. Washington, D.C.: Division of Audiovisual Instructional Service, NEA, 1959, 79 p.

Gage, N. L. (editor). Handbook of Research on Teaching. Chicago, Illinois: Rand McNally and Company, 1963, 1218 p.

Gagne', Robert M. "The Analysis of Instructional Objectives." Paper delivered as a portion of the National Symposium on Programmed Instruction, National Education Association, March 24-26, 1963. See also Krathwohl, David R. (To be published in Teaching Machines and Programed Learning II: Data and Directions, edited by Robert Glaser for the Department of Audiovisual Instruction, NEA. Expected publication date, late 1964.)

Highet, Gilbert. The Art of Teaching. New York: Alfred A. Knopf, 1950, 291 p.

Hilgard, Ernest R. (editor). Theories of Learning and Instruction. The 63rd Yearbook of the National Society for the Study of Education, Part I. Chicago, Illinois: University of Chicago Press, 1964, 430 p.

Jenkins, William A. (editor). The Nature of Knowledge: Implications for the Education of Teachers. Milwaukee, Wisconsin: Edward A. Uhrig Foundation, 1961, 96 p.

Krathwohl, David R. "Comments on Robert M. Gagné's Paper, 'The Analysis of Instructional Objectives.'" Paper delivered as a portion of the National Symposium on Programmed Instruction, National Education Association, March 24-26, 1963. See also Gagne', Robert M. (To be published in Teaching Machines and Programed Learning II: Data and Directions, edited by Robert Glaser for the Department of Audiovisual Instruction, NEA. Expected publication date, late 1964.)

LaGrone, Herbert F. An Introductory Report on a Project to Improve the Professional Sequence in Pre-Service Teacher Education Through the Selective and Planned Use of New Media. Washington, D.C.: The American Association of Colleges for Teacher Education, 1963, 17 p.

Mager, Robert F. Preparing Objectives for Programmed Instruction. San Francisco, California: Fearon Publishers, Inc., 1962, 62 p.

McDonald, Frederick J. Educational Psychology. San Francisco, California: Wadsworth Publishing Company, Inc., 1960, 748 p.

National Education Association. Schools for the Sixties: A Report of the Project on Instruction. New York: McGraw-Hill Book Company, Inc., 1963, 146 p.

Ryans, David G. "Assessment of Teacher Behavior and Instruction," Review of Educational Research, 33:415-41 (October 1963).

__________. Characteristics of Teachers, Their Description, Comparison and Appraisal: A Research Study. Washington, D.C.: American Council on Education, 1960.

__________. An Information-System Approach to Instruction with Special Reference to the Teacher. Paper presented at the annual meeting of the American Educational Research Association, Chicago, Illinois, February 13, 1963. Santa Monica, California: System Development Corporation, SP 1079, 1963, 65 p.

Silberman, Harry F. (editor) "A Symposium on Current Research on Classroom Behavior of Teachers and Its Implications for Teacher Education," The Journal of Teacher Education, 16:235-317 (September 1963).

Smith, B. Othanel. "Toward A Theory of Teaching," Theory and Research in Teaching (edited by Arno A. Bellack). New York: Bureau of Publications, Teachers College, Columbia University, 1963, 122 p.

Smith, B. Othanel and Milton Meux. A Study of the Logic of Teaching. Urbana, Illinois: Bureau of Educational Research, College of Education, University of Illinois. (See Section II-B, page 33.)

Sullivan, George. The Image of the Effective Teacher. New York: The Central School Study, Teachers College, Columbia University, 1962, 55 p.

Taba, Hilda. "Teaching Strategy and Learning," The California Journal for Instructional Improvement, (December 1963) (reprint).

Woodruff, Asahel D. Basic Concepts of Teaching. San Francisco: Chandler Publishing Company, 1961, 237 p.

__________. "The Use of Concepts in Teaching and Learning," The Journal of Teacher Education, 15:81-99 (March 1964).

## SECTION VI

## DIRECTORY OF ORGANIZATIONS DISSEMINATING INFORMATION ON EDUCATIONAL MEDIA AND TEACHER EDUCATION

TEACHER EDUCATION AND MEDIA PROJECT
American Association of Colleges for Teacher Education
1201 Sixteenth Street, N.W.
Washington, D.C. 20036

As a service to all teacher education institutions, related organizations and agencies, the TEAM Project, under contract with the Educational Media Branch of the U.S. Office of Education, functions as a clearinghouse for information dissemination. Write to be placed on mailing list for announcements of all Project publications.

DEPARTMENT OF AUDIOVISUAL INSTRUCTION
National Education Association
1201 Sixteenth Street, N.W.
Washington, D.C. 20036

Audiovisual Instruction, monthly publication; occasionally entire issues are devoted to teacher education and new media. See Section I, pages 1 and 2, of this bibliography.

Audiovisual Communication Review, bimonthly journal with emphasis on reports of new media research.

Monograph Series. See Section I-D, page 19, under Bushnell and Section I-E, page 20, under Hocking.

Technological Development Project Occasional Papers. See Section III, page 41, for special interest paper by Finn, Perrin and Campion; Section I-C, page 11, for Campion and Kelley.

NATIONAL ASSOCIATION OF EDUCATIONAL BROADCASTERS
119 Gregory Hall
Urbana, Illinois

NAEB Journal, bimonthly publication reporting instructional television and radio activities in education.

NATIONAL SOCIETY FOR PROGRAMMED INSTRUCTION
Trinity University
715 Stadium Drive
San Antonio 12, Texas

NATIONAL SOCIETY FOR PROGRAMMED INSTRUCTION--continued

NSPI Journal, monthly except June and August, concentrating on programed instruction developments in education, government and industry.

INSTITUTE OF EDUCATIONAL TECHNOLOGY
(Center for Programed Instruction)
Teachers College, Columbia University
New York, New York 10027

Programed Instruction, bimonthly, reporting developments and research findings in programed instruction.

Journal of Programed Instruction, quarterly research journal devoted to programed instruction.

BUREAU OF EDUCATIONAL RESEARCH AND SERVICE
The Ohio State University
Columbus, Ohio

The News Letter, monthly. Brings information to the educator about the film, the press and broadcasting.

SCHOOL OF EDUCATION
University of Michigan
Ann Arbor, Michigan

Educational Technology Notes and News, bimonthly. This publication is sponsored jointly by the University of Michigan, Michigan State University and Wayne State University. This contribution to the field features short items about current developments in instructional technology.

PROJECT ON INFORMATION PROCESSING
National Science Teachers Association
Box 201
Montclair State College
Upper Montclair, New Jersey

PIP Newsletter, bimonthly publication on the use of computers and information storage systems at the school and college levels. Requests should be sent to the Project Director.

CENTER FOR DOCUMENTATION AND COMMUNICATION RESEARCH
School of Library Science
Western Reserve University
Cleveland 6, Ohio

The Educational Media Research Information Center (EMRIC) has stored over 6,500 documents concerned with education and media. Abstracts of documents are available. References from these abstracts pertinent to teacher education have been included in this bibliography.

EDUCATIONAL MEDIA COUNCIL
250 West 57th Street
New York 19, New York

Educational Media Index, published in 14 volumes. This is an indexed inventory of all types of instructional materials, excluding standard printed materials and replaces the H. W. Wilson educational film and filmstrip guides as the standard reference for new media instructional materials. Volume 7 is devoted to teacher education materials. Volumes may be purchased separately. Supplements or complete revisions are available annually. For bibliographic data see Section IV, page 43.